THE DEVELOPMENT OF MA PROGRAMS AT NAZARBAYEV UNIVERSITY:

THE IMPACT OF THE ALCOHOL MINIMUM UNIT PRICING POLICY ON THE CONSUMPTION OF ALCOHOLIC BEVERAGES: EVIDENCE FROM RUSSIA

by

Anel Mukasheva

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Abstract

This paper estimates the effect of minimum retail price policy imposed on vodka and other hard liquor on the consumption of five alcoholic beverages: beer, dry wine, fortified wine, moonshine, and vodka. Using the OLS with community fixed effect, it was found that men increased the consumption of fortified wine by 4.94 percent and it could become an alternative to beverages that became more expensive after the policy implementation. Moreover, the effect of policy differs across age groups and sample restriction. In overall, policy increased the consumption of alcoholic beverages with lower alcohol content but failed to decrease the consumption of vodka, which was its primary goal.

Contents

1 Introduction

The high consumption of alcohol with its harmful effects still remains a problem for many countries. The use of alcohol causes serious health, economic, and social consequences that hurt not only drinkers themselves but the people around, which means that the whole society is affected. Alcohol is a fluid with sedative, psychoactive qualities that generate dependency and intoxication of the organism. The harm from its usage places alcohol in the top five risk factors for disability, disease, and death (WHO, 2011).

The Russian Federation is one of the countries with the highest alcohol per capita consumption in the world. It reaches fourth place by the volume of pure alcohol consumed after Belarus, Moldova, and Lithuania (WHO, 2014). The reasons for such a trend goes back to the history of the country when government encouraged to open drinking places and temporarily removed restriction on distillation to increase government revenue. Drinking was the way for people to feel freedom from the economic and social disorder. Hostile and cold climate of the country, little agricultural potential also influence higher alcohol use (Nemtsov, 2005).

The consequences brought by excessive alcohol consumption are the indicators that a serious problem actually exists. The alcohol-attributable fraction (AAF) for death from all other reasons in the Russian Federation is very high. Approximately 30.5 percent of the deaths in the country can be directly or indirectly attributed to the alcohol-related causes (WHO, 2014). According to the Federal State Statistics Service, about 20 out of every 100,000 people die because of accidental alcohol poisoning. Another alarming statistic is the number of people who are followed-up by the dispensaries due to alcoholism and alcoholic psychosis, which is above 1,000 out of every 100,000. This small sampling of statistical evidence clearly shows that the alcohol consumption brings very

harmful effect (FSSS, 2015).

From the history of the country, the most massive and disputed anti-alcohol campaign was implemented by Gorbachev government in 1985. This large-scale policy aimed at restricting the availability of alcohol and increasing its price. The implemented measures were of an extremely reformist origin. They imposed very strict prohibitions on the production and sales of alcohol to make it hard to find and expensive to consume such drinks. Some strong moral, administrative and political suppression was also used to make people stop drinking. While life expectancy and health improved, such shock therapy resulted in a phenomenal increase of illegal alcohol production and a rise in consumption of home-made liquor (moonshine). Such a contradictory effect shows that there is a need for a more flexible and less harsh policy (Zaigraev, 2010).

The imposition of the excise tax [1] is long-standing practice in the Russian Federation (RF). It has a long history so that it has been revised and modified in different periods of time. The modern excise tax policy was set by the law of the RF of December 6, 1991, "On Excises". It is used until today with subsequent changes and additions. Under federal law, different amounts of tax are imposed on different types of alcoholic beverages, and they vary according to the amount of pure spirit in the drink. That motivates people to drink beverages with a lower alcohol content because of its lower price. The excise tax increases almost every year and even several times in a one-year period. It also usually increases together with the inflation rate (Khaltourina and Korotayev, 2013). The history of excise tax change is available in Tables A1 and A2 in Appendix.

The illegal alcohol sell is another serious and growing problem in the Russian Federation. According to the Federal State Statistic Service, the production and sale of the vodka amounted to

[1] This type of tax is an indirect tax included in the price of the specific goods that bring harm to the health. Such taxes are imposed in order to decrease the consumption of unhealthy commodities such as alcohol and tobacco.

120 and 176 million decaliters respectively, which means that the excise duties were not paid from 56 million decaliters sold in 2008. For the 2009 five-month period the excise tax revenue decreased by 12.8 percent which is 28.7 billion roubles[2]. The reason for such consequences is the cheaper selling price of illegal alcoholic beverages. Vodka, for instance, could be bought from 40 to 60 roubles per bottle which is unlikely to be of such a small amount if to account for the production cost, excise and value added tax (www.gks.ru).

In order to address the problem of counterfeit alcohol market expansion, a specific new alcohol pricing policy was implemented in 2010. It was decided to set minimum retail price (MRP) on vodka and beverages with an alcohol content higher than 28 percent. That means that now the 0.5 bottle of some specific alcoholic drinks could not be bought less than the amount imposed by the government. The policy was a first step to deal with cheap, low-quality alcohol, restrict its availability, and increase price. Now with the equal minimum price of legal and illegal products, individuals could choose one with the higher quality. In case of the positive policy results, the government discussed to make extensions and impose it on other types of alcoholic beverages as well.

Figure 1 shows the changing trend of newly introduced minimum retail price for two types of beverages, average price, and average minimum price for vodka. The MRP is set per 0.5 liter bottle and varies according to the amount of ethyl spirits in the drink. The initial price was 65 and 89 roubles for hard liquor (beverages with spirits content of more than 28 percent) and vodka, respectively. It has an increasing trend over all three year period and reached 123 and 170 roubles per bottle of hard liquor and vodka, respectively. The MRP values for each year are available in Table A3 in Appendix. The figure also represents the average price values for vodka. As

[2]About 900 million dollars, according to the RF Central Bank 2009 average yearly exchange rate.

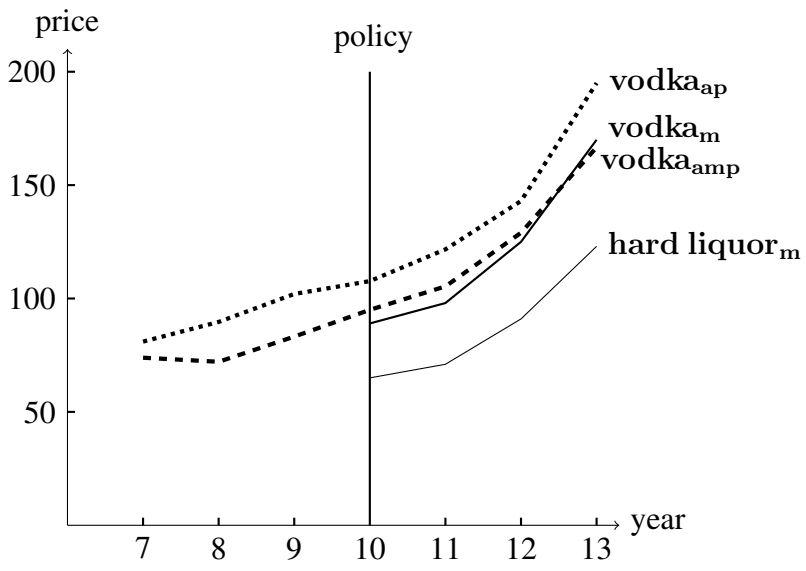

Figure 1: Minimum retail and average prices per 0.5 lt, in roubles

Source: Expert Council of the Federal Service for Alcohol Market Regulation, Unified Interdepartmental Information and Statistical System, Russian Monitoring Longitudinal Survey

can be seen, the average vodka price ($\mathbf{vodka_{ap}}$) increased over time and is much higher than the minimum retail vodka price ($\mathbf{vodka_{m}}$). As the average price includes the expensive vodka as well and the policy set minimum price, it is worth looking at the average minimum price of vodka trend ($\mathbf{vodka_{amp}}$) which is taken from the community questionnaire of Russian Monitoring Longitudinal Survey that collects the cheapest and most expensive prices of the goods. The average minimum price has increased over the years too and its trend did not considerably change after the policy implementation in 2010. At the same time, the trend after 2010 is very close to the vodka minimum retail price so the price of the cheapest vodka bottle sold is almost equal to the policy price value imposed. That can be one of the policy results that the price floor became a distinctive

minimum selling price and excluded producers who underpriced.

In this paper, I will estimate the effect of MRP policy on consumption of five alcoholic beverages — beer, dry wine, fortified wine, moonshine, and vodka — in the Russian Federation. The work will also include the idea of rational addiction to see whether the past consumption of alcoholic beverages influences its present consumption.

The study may be helpful in understanding the consumer demand for different types of alcohol, the possible reasons for change in demand, citizens' response to the implementation of new policies, and finally contribute to the set of more suitable and effective policies for the decrease of alcohol consumption in the future.

The paper is organized in the following way. Section 2 will summarize previous studies on the alcohol consumption and tax or policy implementation. Section 3 will present the dataset and model. Section 4 will show the empirical results and Section 5 is a conclusion part.

2 Literature Review

There is an extensive number of works that have studied the relationship between alcohol consumption and the excise tax or other control policy. However, most of these studies rely on research conducted in the United States, Australia, United Kingdom or other European countries and still very few works have focused on the Russian Federation.

The common theoretical model of rational addiction of Becker and Murphy (1988) is one of the first models that develop an idea of the rational behaviour of addicted individuals. The theory states that a certain good is known to be addictive if the increase in its past consumption leads to an increase in its current consumption. At the same time, authors show that addicted individuals

respond to changes in the price of the good. The effect of a permanent change in price on the demand is initially small but it grows over time. And the long-run demand for addictive goods is likely to be more elastic in comparison with demand for non-addictive goods.

A summary of economic literature made by Chaloupka et al. (2002) examines previous works that estimated the change in price on alcohol consumption and alcohol abuse consequences among teenagers and young adults across the US. They reported that heavy drinking may be reduced with an increase in federal, state and local taxes on the alcoholic beverages. They also discuss that beer is the most widely used drink among youths and its consumption is inelastic to the changes in price.

Many meta-analysis works have studied the correlation between alcohol tax or price measures and its sales. Gallet (2007) studied alcohol demand using 132 previous studies across 24 countries. He reported that income, price, and advertising elasticities are sensitive to the addition of other alcohol prices to the demand equation. Because of that, the optimal tax needs to take into account the interdependencies in demand across alcohol drinks. It was also found that price elasticity differs across age groups and beverage types, so when implementing a tax this difference should be considered as well. Wagenaar et al. (2009) reviewed 112 studies in order to see whether drinking has an inverse relationship with the anti-alcohol policies. The authors reported elasticity of -0.44 for alcohol in total. Therefore, they confirm that public policies that increase alcohol prices are an effective way to decrease its consumption. It is additionally stated that the level of price effect differs across various groups. Thus, the impact on heavy drinkers is less than on drinkers in general (-0.28 of elasticity reported).

Meier et al. (2010) also studied the impact of change in price on drinking and purchasing patterns in England. The work stated that minimum unit pricing policies are more likely to affect

harmful drinkers in comparison with, for example, young alcohol users or all drinkers in general. That is why the heterogeneity of the population should be considered when making decisions regarding policy implementation. A similar idea was introduced by Holmes et al. (2012), who estimated the impact of a newly introduced minimum unit pricing policy on different socio-economic groups. They conclude that the policy would affect hard drinkers more than the moderate ones. Thus, the consumption behaviour of hard drinkers decreased by 3.7 percent in comparison with the overall 1.8 percent decrease. Hard drinkers with both low and high levels of income reduced their alcohol consumption, but to a greater extent for those with the lower wage.

There is evidence that minimum pricing policy brings significant public health benefits. Stockwell et al. (2012) claim that minimum pricing is a promising policy that might help to reduce health problems resulting from excessive alcohol consumption. The study determined that a 10 percent increase in the minimum prices decreased the consumption of various alcohol types by up to 22 percent. It also increased the government revenue and shifted the consumer preferences towards the alcoholic beverages with lower spirit content. The public health benefits are also discussed in the work of Zhao et al. (2013). The research investigates the relationship between minimum price and the alcohol-attributable deaths between 2002-2009 in British Columbia, Canada. A 1 percent increase in the minimum alcohol price resulted in about a 3 percent mortality decrease, which is a considerable effect of a policy implementation.

Regarding the Russian Federation, there are several studies written in English relevant to this work. The first one is a study by Andrienko and Nemtsov (2005), who examined the static and dynamic demand for alcohol between 1994 and 2002. The work is based on the model of Becker and Murphy, where past and future consumption together influences the addiction effect. The estimated own-price elasticities vary from -1 to -3 for the different types of alcoholic drinks, so the

important conclusion for policymakers is that an increase in price for any type of alcoholic drink will lead to a decrease in its consumption.

Khaltourina and Korotayev (2013) reviewed the history of the most significant anti-alcohol policies and tax implementations in the Russian Federation. The work's main objective was to identify the relationship between mortality and alcohol control policy measures. It was found that the actions of denaturalization (reduction of the ethanol amount in the substances) implemented in 2006 have led to a reduction of mortality rate, which is the evidence that alcohol-related mortality rate is highly influenced by the use of ethyl spirits. They also found that the increase of the excise tax in the 2004-2012 period decreased the mortality in comparison with the 1998-1999 years when the tax was decreased. The study also argues that the excise tax collection still remains an issue for the country so that the pricing policies should be revised and combined together with the health policies.

Another related work is the study of Goryakin et al. (2014) who explored the price elasticities of the daily consumption of beer, home-made liquor, vodka, and different types of wine in Russia for the 1994-2009 time period. They also estimated the price elasticities by group dividing the sample by gender, education, and economic status. The fortified and table wines were found to be substitutes for the cheap vodka. Also, the own-price elasticity for expensive vodka was found to have a significant result of -0.019. At the same time, the study highlights that the implementation of an effective policy is a very complicated issue. The increasing price of the product might change the purchasing behaviour of the people, but usually does not cause decrease in alcohol consumption and makes people shift to another type instead. That is why they conclude that the implementation of only pricing and tax policies is not very helpful and some additional measures should be created.

In one of the recent studies, Yakovlev (2016) estimated the dynamic model of drinking be-

haviour that included two important features of the Russian nation – heavy drinking with friends and family (peer effect), and habit formation. The results reported that peer influence and habit persistence increase the estimated price elasticity by 1.9 times for younger individuals, and by about 1.4 times for the older ones. The paper also studied the effect of heavy drinking on male mortality. It found significant age heterogeneity so that drinking younger males have a higher mortality rate. Moreover, it was estimated that a 50 percent tax on the vodka would save 1 percent young males in 6 years.

In addition to the previous works, there is also a Russian language literature that studied the effectiveness of 'pricing' control policies in the country. They are mostly theoretical with little empirical research. The common idea for most of the articles is that an increase in excise tax or minimum prices does not bring the expected results in the reduction of alcohol consumption. As the alcohol becomes less affordable, people are more likely to switch to counterfeit or home-made products so consumption does not decrease overall. The regulations, conversely, worsen the already existing problem of illegal alcohol market expansion (Isarov, 2001; Nemtsov, 2015; Solov'ev, 2013; Zaigraev, 2001; Zhuk and Kizilova, 2013).

The different types of research described above have been conducted on the topic of alcohol consumption and its consequences. At the same time, very little work has focused on the effect of specific policy and alcohol consumption in the Russian Federation. Using all feasible information from the previous studies, this work will be the first attempt to identify the effect of MRP policy implementation on the consumption of alcoholic beverages.

3 Data and Methodology

The study is based on the Russian Longitudinal Monitoring Survey (RLMS). This work used 2007 - 2013 period, taking 3 years before and after the MRP implementation. The survey is coordinated by the Carolina Population Center at the University of North Carolina, in cooperation with the State Committee on Statistics of the Russian Federation (http://www.cpc.unc.edu/rlms). The RLMS is a household-based survey aimed at estimating the effects of Russian reforms on the economic well-being of individuals and households. It has multi-stage probability sampling, and the primary sampling units (PSU) are selected from geographically determined stratification. The number of observations in the work is 77, 209 in total. Almost 75 percent of the sample reports being an alcohol drinker (57, 855 people). There are 140 regions (communities) and 85 nationalities. The majority people in the sample are represented by the Russian nationality (87 percent). Tatar, Udmurt and Kabardian are the major representatives among other nationalities. The age of the respondents was restricted to the range of 16 - 54 years for women and 16 - 59 years for men, which is the population working age in the RF.

The information was collected in the form of an interview conducted by professional interviewers. The data used were extracted from the adults, households and community questionnaires. The first one provides information on socio-demographic elements and daily consumption of a specific alcoholic beverage. The individuals were asked to answer whether they consumed various alcoholic drinks in the last 30 days, and if they did, what was the amount of daily consumption of that specific drink. The household questionnaire provides information on household income. The community questionnaire gives the information on the availability of hot and cold water, sewerage, and heating systems by regions. The prices were taken from the Unified Interdepartmental In-

formation and Statistical System [Edinaia mezhvedomstvennaya informacionno-statisticheskaya sistema, EMISS]. The database provides average consumer prices for different alcoholic beverages by regions. The data for Gross Regional Product (GRP) was taken from the RF Federal State Statistics Service. The income, prices for the alcoholic beverages, and GRP were deflated by the consumer price index with the base year of 2013 to get the real values.

It is important to mention that the prices used in this work are average regional ones and no minimum regional alcohol prices were available in the database. The RLMS community minimum prices were not taken because of the many missing information in the data. As the study estimates the effect of minimum retail prices increase, using minimum prices instead of average could improve the regression results.

The regression results were obtained for different samples. The first one is a general sample described above, which is restricted to the working age population only (16 - 59 years old). The second one estimates the regression results for males and females separately. The next one is limited to the respondents of Russian nationality to restrict national and religious differences. The last one is restricted to the living region (urban or rural) to limit regional, economic and cultural differences. Based on the main objective to identify the difference in alcohol consumption related to the MRP implementation, this research will model the equation introduced by Goryakin et al. (2014) with some additions:

$$Ln(C_{ict}^{A}) = \alpha + \beta_1 \sum_{A} Ln(P_{ct}^{A}) + \beta_2 X_{ct}^{1} + \beta_3 X_{ict}^{2} + \beta_4 Policy_t + \gamma_c + \epsilon_{ict} \quad (1)$$

where C_{ict}^{A} is an alcohol consumption of a definite type *A* of individual *i* from the community *c* at time period *t*; *P* is a community-level average price vector for a specific beverage. X_{ct}^{1} is a vector that contains community time-varying variables. These are the GRP values and dummy variables

which respond to the availability of hot and cold water, sewerage, and a heating system. All these considers the size of each region's economy, its well-being and performance, and are proxies for the potential public spending on infrastructure and the level of socio-economic development.

X^2_{ict} includes individual-level variables: age, dummies for gender, marital, health, and working status, years of education, household income level, number of children and dummy of whether the person is on a maternity leave. Health status equals 1 if person has any chronic illness or diabetes, blood pressure, heart attack, and stroke. Working status equals 1 if person has a job and 0 otherwise. It also includes lagged income, working and alcohol consumption status. Alcohol consumption status is a dummy variable that indicates whether the individual was alcohol consumer previously or not. It equals 1 if person consumed alcohol last year and 0 if not. These are the socio-demographic elements. *Policy* is the dummy variable which identifies the presence or absence of the policy of interest. It equals 0 until 2009, before MRP implementation, and 1 after it. γ_c is the community fixed effect and ϵ_{ict} is an error term.

Under the policy implementation, the increase in the price of vodka may result in a substitution effect – the people will decrease the consumption of a highly priced good and switch to more affordable ones like beer, wine or moonshine. At the same time, the imposed high prices may reduce the purchasing power of people and lead to the smaller demand of vodka. This is the income effect. High prices typically will decrease the consumption of the good (vodka) but at the same time, as expected, may have an effect on the consumption of other alcoholic drinks.

In general, the alcoholic beverages' demand is non-positive with respect to the own-prices increase. The changed price of vodka will most likely influence people to reduce its consumption. The cross-price elasticity may have positive or negative value. The higher vodka price may, for example, result in an increased demand for beer so the products are substitutes and can replace

each other. And vice versa, the demand for some type of wine can decrease, which means that the drinks are complements and preferred to be used together.

4 Results

4.1 Descriptive Statistics

Table 1 represents the descriptive statistics of the socio-demographic characteristics of the respondents by gender. For the general (16-59-year-old individuals) sample, males seem to be harder drinkers. The average male is one year older and one year less educated in comparison with females. At the same time, the employment level is higher among men. 79 percent of men have a job, which is 2 percent more in comparison with women.

Figure 2 shows the changing trend of per capita daily alcohol consumption average values for five different types of drink between 2007 and 2013. Evidently, beer has the highest consumption rate. Its consumption reached 350 grams per individual in 2007 and gradually decreased up to 280 grams in 2013. Beer has the lowest alcohol content among drinks which may be the reason for such a high consumption. Vodka is also consumed a lot with a decreasing trend over time again. Within 7 years, its consumption decreased from about 74 to 56 grams per individual. Dry wine is moderately consumed; its maximum average daily consumption reaches up to 55 grams.

Fortified wine and moonshine are the least consumed drinks, with the average daily consumption from approximately 7 to 15 grams per individual. Generally, the usage of all beverages experienced a moderate decrease.

It is notable that the consumption of vodka started to decrease more sharply after the 2010 year

	Males	Females
Age (years)	36	35
Education (years)	12	13
Married (%)	58	52
Has a job (%)	79	77
Alcohol drinker (%)	78	71
Number of individuals	37, 236	39, 973

Table 1: Average socio-demographic characteristics

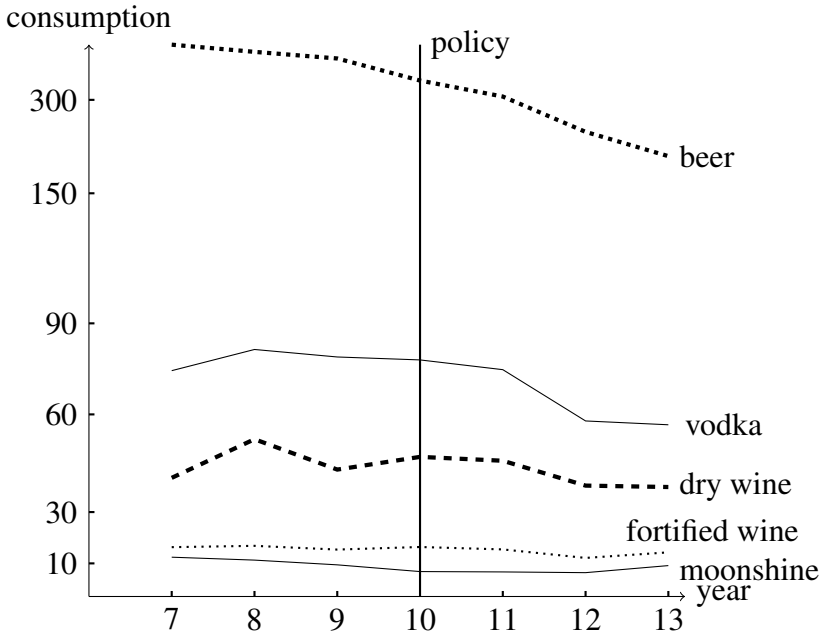

Figure 2: Average daily alcohol consumption per capita by beverage type, in grams

MRP implementation. Within the new policy, beverages with higher alcohol content became less affordable which could lead to its lower consumption.

Next figure shows the average daily alcohol consumption only for individuals who reported to be a drinker. Unlike in Figure 2, the consumption of beer has an increasing trend over the years. Overall, its consumption increased from 827 to 937 grams per drinking individual.

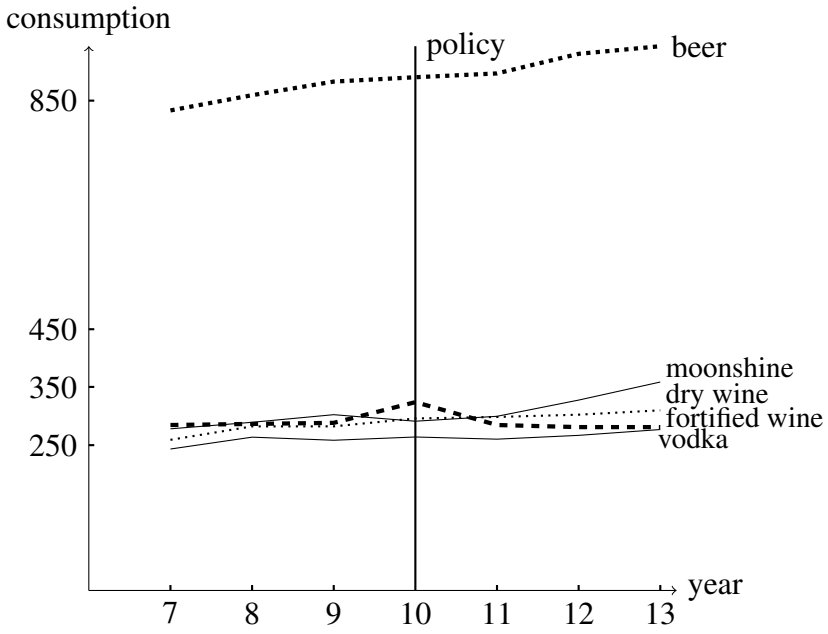

Figure 3: Average daily alcohol consumption of drinkers by beverage type, in grams

The consumption of moonshine, fortified wine, dry wine, and vodka seem to be on average similar. As can be seen from the figure, the consumption of moonshine increased after the policy implementation from 290 grams in 2010 to 310 grams in 2013. Interestingly, the fortifies wine consumption had an increasing trend up to the 2010 and started to decline after that. It firstly experienced a distinct decline in 2011 and then started to decrease in a more gradual way. The

consumption of dry wine and vodka almost did not change with very small consumption increase over the 6-year period.

Overall, there is a small change in the consumption of moonshine and fortified wine after the policy implementation in 2010 for those who reported being a drinker. Together with the beer increasing consumption pattern, both beer and moonshine cold become a cheaper alternative to the beverages increased in price and that is why started to be consumed more. At the same time, there is no considerable change in the consumption behaviour for both drinkers and population as a whole. The policy probably did not significantly changed the consumption of vodka or other beverages. It is likely that the individuals did not become drinking notably less but implemented price floor primarily resulted in the alcohol quality increase or illegal alcohol sale decrease, which were the primary policy goals.

4.2 Empirical Results

4.2.1 General Results

Table 2 shows the general results – the effect of MRP policy on the alcohol consumption of a pooled sample from 2007 to 2013 restricted to the working population age. The fixed effect is included in order to control for the average difference in the community groups. As can be seen, the policy does not have a main significant effect on the consumption of alcoholic beverages after 2010 until 2013. Despite that the new law was oriented to the vodka price change, the policy showed no significant effect on its consumption. At the same time, if to look at policy effect on different groups, there is a policy effect that changed the consumption of some drinks. In comparison with a base group (16-25 years old individuals), the individuals from age group 2 (45-59 years old)

tend to increase their consumption of beer with the implementation of policy. In comparison with females, males seem to decrease the consumption of vodka by some extent after the MRP.

The law stimulated an increase in consumption of beverage with a lower alcohol content (beer), which is due to the income effect. In fact, vodka consumption significantly decreased only for male group. It is also seen that some demographic characteristic variables have significant values. Being a male is positively related to the consumption while having a job and more years of education have the opposite relationship. Thus, for example, the working person consumes lower amount of moonshine, and vodka by 13.6 and 8.3 percent, respectively. In comparison with single individuals (base group), married people consume less beer, fortified wine, moonshine, and vodka; widows and widowers consume less moonshine as well. The higher household income resulted in the lower consumption of moonshine, while its lagged value decreases the consumption of all beverages except moonshine.

Interestingly, the present consumption of alcoholic beverages was highly influenced by its previous year consumption, which shows an additive nature of drinking. Thus, if the individual consumed alcohol last year, his or her consumption of beer, dry wine, fortified wine, moonshine, and vodka increased by 14.1, 9.8, 10.4, 11.7, and 11.8 percent in the current period, respectively.

Additionally, dry wine appear to be the substitute good with moonshine and fortified wine. The cross-price elasticities are positive and significant which mean that a 10 percent dry wine price increase results in 5.9 percent moonshine and 3.4 fortified wine consumption increase.

Vodka and fortified wine were found to be substitutes as well. At the same time, the fortified wine own-price elasticity is significant and equals to -0.83.

	(1)	(2)	(3)	(4)	(5)
	beer,gr	dry wine, gr	fortified wine, gr	moonshin, gr	vodka, gr
beer, rub	0.014	-0.105	-0.065	-0.760	-0.165
	(0.077)	(0.095)	(0.161)	(0.195)	(0.072)
dry wine, rub	0.071	0.009	0.349*	0.598*	0.166
	(0.121)	(0.161)	(0.203)	(0.317)	(0.114)
fortified wine, rub	-0.023	0.070	-0.835***	-0.590	-0.085
	(0.067)	(0.092)	(0.189)	(0.374)	(0.115)
vodka, rub	0.083	-0.025	0.596***	0.302	0.137
	(0.067)	(0.092)	(0.176)	(0.188)	(0.088)
policy	-0.053	-0.061	-0.025	-0.136	-0.095
	(0.053)	(0.078)	(0.133)	(0.189)	(0.076)
gender (male)	0.529***	0.242***	0.430***	0.472***	0.542***
	(0.023)	(0.044)	(0.053)	(0.072)	(0.019)
age group 1 (26-45)	-0.001	0.021	-0.104	-0.055	0.011
	(0.033)	(0.066)	(0.108)	(0.156)	(0.057)
age group 2 (46-59)	-0.173***	-0.158**	-0.213	-0.013	-0.058
	(0.037)	(0.064)	(0.134)	(0.166)	(0.060)
policy*age group 1	0.048	0.009	0.089	0.255	0.115
	(0.046)	(0.077)	(0.120)	(0.189)	(0.075)
policy*age group 2	0.084*	0.108	0.110	0.205	0.103
	(0.047)	(0.076)	(0.143)	(0.204)	(0.070)
policy*gender (male)	-0.004	-0.065	-0.057	-0.025	-0.038*
	(0.023)	(0.051)	(0.060)	(0.063)	(0.023)
alcohol consumer, lag	0.141***	0.098***	0.104**	0.117*	0.118***
	(0.024)	(0.029)	(0.046)	(0.065)	(0.027)
educ. years	-0.014***	-0.004	-0.023***	-0.031***	-0.020***
	(0.003)	(0.004)	(0.006)	(0.011)	(0.004)
married	-0.072***	-0.051	-0.108**	-0.245***	-0.074**
	(0.024)	(0.062)	(0.052)	(0.077)	(0.034)
divorced	0.023	0.005	0.015	0.016	0.035
	(0.028)	(0.061)	(0.062)	(0.089)	(0.038)
widowed/er	0.034	0.063	0.046	-0.194*	-0.001
	(0.046)	(0.062)	(0.092)	(0.116)	(0.052)
household income	-0.010	-0.003	-0.012	-0.021*	-0.007
	(0.006)	(0.008)	(0.014)	(0.012)	(0.005)
household income, lag	-0.010*	0.013***	-0.026**	0.001	-0.013***
	(0.005)	(0.005)	(0.011)	(0.013)	(0.005)
job	-0.031	-0.030	-0.072	-0.136**	-0.083***
	(0.020)	(0.029)	(0.045)	(0.058)	(0.020)
job, lag	-0.035**	0.031	0.009	-0.083*	-0.053**
	(0.018)	(0.030)	(0.061)	(0.046)	(0.022)
health status	0.022*	-0.026	0.019	0.045	-0.011
	(0.013)	(0.020)	(0.034)	(0.043)	(0.014)
GRP	0.017	0.340**	-0.091	0.233	0.040
	(0.086)	(0.135)	(0.171)	(0.234)	(0.079)
N	12,405	5,298	1,852	1,162	10,867
R^2	0.176	0.047	0.117	0.220	0.173

[1] number of children variable and dummy for maternity leave are included;

[2] community level dummies of hot/cold water supply, heating and sewerage systems are included;

[3] robust standard errors;

[4] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2: The effect of MRP policy on alcohol consumption by the type of drink. OLS with community fixed effect

As have been revised in the previous parts, the heterogeneity of population is an important factor for consideration while estimating the policy effect. For that matter, the next three sections of the work will restrict the results for several samples.

4.2.2 Gender

This section will show the consumption of alcoholic beverages for males and females separately to see the difference in consumption patterns by gender. Table 3 reports the effect of MRP policy on male alcohol consumption. The table results show that under the policy implementation males increased the consumption of fortified wine by 4.94 percent. Because of the increased vodka price resulted from policy, the individuals increased the fortified wine consumption, which could become a cheaper alternative to vodka.

The consumption of beverages also varies according to age groups. Both age groups consume more fortified wine in comparison with the base group but the interaction term between policy and age is significantly negative for the fortified wine. Dry wine and moonshine were found to be substitutes with the cross price elasticity of 0.10. The own price elasticity of fortified wine is -0.89 for men. Past alcohol consumption influenced the current consumption of beer. We can see that previous year alcohol consumption increased the current beer consumption by 7.4 percent. Drinking is an addictive habit for males as well.

Table 4 represents the effect of MRP policy on female alcohol consumption. The policy did not have the main effect on the consumption of any five beverages. At the same time, when looking at the effect of policy on different age groups we can see that, in comparison with base age group, females who are between 46 and 54 increased their beer and dry wine consumption, and those who are between 26 and 45 increased the consumption of moonshine. Overall, the policy resulted in

a reverse effect, in which the consumption of drinks other than vodka increased. The result is in line with the Russian language literature revised in the previous section that states that the pricing policies do not decrease the consumption of alcoholic beverages but just make people switch to its another types. The previous alcohol consumption affects the current consumption of beer for females too and one more time shows that considering addiction is important.

	(1) beer, gr	(2) dry wine, gr	(3) fortified wine, gr	(4) moonshine, gr	(5) vodka, gr
beer, rub	0.065	-0.437	0.213	-0.874	-0.167
	(0.111)	(0.226)	(0.419)	(0.266)	(0.093)
dry wine, rub	-0.008	-0.153	0.253	0.100***	0.084
	(0.155)	(0.415)	(0.617)	(0.349)	(0.116)
fortified wine, rub	-0.043	0.402	-0.894**	-0.813	-0.061
	(0.090)	(0.262)	(0.447)	(0.196)	(0.122)
vodka, rub	0.105	-0.349	0.698**	0.350	0.171
	(0.078)	(0.204)	(0.305)	(0.219)	(0.193)
policy	-0.027	0.076	0.0494*	-0.129	-0.107
	(0.078)	(0.263)	(0.265)	(0.176)	(0.075)
age group 1 (26-45)	-0.012	0.205	0.379**	0.059	-0.014
	(0.059)	(0.228)	(0.160)	(0.107)	(0.061)
age group 2 (45-59)	-0.144***	0.049	0.347**	0.113	-0.041
	(0.055)	(0.222)	(0.155)	(0.115)	(0.066)
policy*age group 1	0.027	-0.214	-0.405*	0.186	0.098
	(0.067)	(0.254)	(0.240)	(0.156)	(0.077)
policy*age group 2	0.050	-0.103	-0.433*	0.160	0.072
	(0.068)	(0.258)	(0.226)	(0.160)	(0.073)
alcohol consumer, 1ag	0.074**	0.021	0.046	0.081	0.040
	(0.033)	(0.076)	(0.128)	(0.069)	(0.033)
N	7,531	1,045	566	874	7,250
R^2	0.022	0.049	0.106	0.120	0.028

[1] the same explanatory variables are used;

[2] robust standard errors;

[3] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: The effect of MRP policy on male alcohol consumption by the type of drink. OLS with community fixed effect

The consumption of beverages again varies according to age groups. The own-price fortified

wine elasticity equals to -0.80. Vodka was found to be substitute with dry wine and fortified wine for females. The result look reasonable as women mostly prefer beverages with lower alcohol content.

	(1) beer, gr	(2) dry wine, gr	(3) fortified wine, gr	(4) moonshine, gr	(5) vodka, gr
beer, rub	-0.053	-0.029	-0.164	-0.430	-0.168
	(0.081)	(0.090)	(0.243)	(0.279)	(0.071)
dry wine, rub	0.178	0.041	0.454*	-0.104	0.393**
	(0.151)	(0.184)	(0.258)	(0.127)	(0.193)
fortified wine, rub	0.011	0.022	-0.801***	-0.042	-0.144
	(0.092)	(0.095)	(0.261)	(0.429)	(0.158)
vodka, rub	0.034	0.048	0.427**	0.540	0.010
	(0.093)	(0.101)	(0.187)	(0.368)	(0.112)
policy	-0.095	-0.078	-0.155	-0.202	-0.116
	(0.076)	(0.072)	(0.152)	(0.319)	(0.161)
age group 1 (26-45)	0.017	-0.017	-0.204	-0.361	0.054
	(0.042)	(0.065)	(0.132)	(0.232)	(0.101)
age group 2 (46-54)	-0.262***	-0.200***	-0.361**	-0.286	-0.099
	(0.053)	(0.066)	(0.145)	(0.228)	(0.104)
policy*age group 1	0.062	0.030	0.171	0.647**	0.129
	(0.063)	(0.076)	(0.139)	(0.303)	(0.148)
policy*age group 2	0.116*	0.122*	0.196	0.355	0.120
	(0.066)	(0.073)	(0.151)	(0.312)	(0.151)
alcohol consumer, lag	0.202***	0.112***	0.142***	0.118	0.233***
N	4,874	4,253	1,286	288	3,617
R^2	0.058	0.038	0.049	0.253	0.053

[1] the same explanatory variables are used;

[2] robust standard errors;

[3] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: The effect of MRP policy on female alcohol consumption by the type of drink. OLS with community fixed effect

4.2.3 Nationality

As discussed earlier, the majority of the sample appears to be Russian. That is why it was attractive to compare the difference between alcohol consumption among Russian people and other national-

ities in order to control for the cultural and religious differences. The regression results presented in Table 5 are performed on a sample containing Russian nationality only.

	(1)	(2)	(3)	(4)	(5)
	beer, gr	dry wine, gr	fortified wine, gr	moonshine, gr	vodka, gr
beer, rub	0.036	-0.138	0.043	-0.746	-0.160
	(0.077)	(0.118)	(0.174)	(0.168)	(0.070)
dry wine, rub	0.027	-0.040	0.187	0.660**	0.117
	(0.113)	(0.157)	(0.212)	(0.259)	(0.113)
fortified wine, rub	0.033	0.126	-0.714***	-0.646	-0.024
	(0.068)	(0.101)	(0.203)	(0.196)	(0.117)
vodka, rub	0.054	-0.044	0.500**	0.446**	0.106
	(0.070)	(0.101)	(0.195)	(0.225)	(0.090)
policy	-0.061	-0.095	-0.083	-0.174	-0.085
	(0.056)	(0.078)	(0.144)	(0.188)	(0.082)
gender (male)	0.532***	0.246***	0.437***	0.489***	0.538***
	(0.025)	(0.048)	(0.064)	(0.077)	(0.020)
age group 1 (26-45)	-0.009	-0.005	-0.076	-0.004	0.037
	(0.037)	(0.065)	(0.108)	(0.162)	(0.067)
age group 2 (46-59)	-0.166***	-0.180**	-0.249*	-0.008	-0.051
	(0.040)	(0.069)	(0.133)	(0.175)	(0.070)
policy*age group 1	0.062	0.035	0.076	0.269	0.084
	(0.051)	(0.078)	(0.126)	(0.199)	(0.080)
policy*age group 2	0.089*	0.145*	0.147	0.263	0.095
	(0.052)	(0.080)	(0.155)	(0.211)	(0.074)
policy*gender (male)	-0.008	-0.077	-0.035	-0.008	-0.035
	(0.024)	(0.054)	(0.065)	(0.078)	(0.023)
alcohol consumer, lag	0.129***	0.089***	0.080*	0.130*	0.129***
	(0.024)	(0.033)	(0.042)	(0.074)	(0.027)
N	11,191	4,824	1,666	939	9,349
R^2	0.178	0.044	0.121	0.229	0.174

[1] the same explanatory variables are used;

[2] robust standard errors;

[3] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5: The effect of MRP policy on alcohol consumption by the type of drink for Russian nationality.

OLS with community fixed effect

The effect of the policy is again different across different to age groups. After the MRP implementation, in comparison with the base group, the Russian people aged between 46 and 59

increase their consumption of beer and dry wine. As these drinks are less expensive and less taxed, individuals could choose to consume it to a higher extent.

Moonshine were found to substitute with dry wine and vodka for Russian people. For instance, a 10 percent dry wine price increase resulted in 6.60 percent moonshine consumption increase. The results look reasonable, as Russian people could be more familiar with home moonshine production so that it is substitute with other drinks. Own-price fortified wine elasticity is significant too and equals -0.71. The increase of current alcohol consumption was influenced by past alcohol consumption from 8 to 13 percent for Russian nationality.

4.2.4 Community

This section will display the alcohol consumption determinants according to the living community, or living region. The Russian Federation is the largest country and, consequently, has different regional economies, infrastructure development levels, population size and other characteristics among its communities. In order to count for the consumption difference among different communities, we estimate the effect of MRP policy on alcohol consumption for urban and rural areas separately.

The effect of policy on urban citizens is reported in Table 6. The policy was influential for urban citizens aged between 26-45 for moonshine, and for beer and moonshine for those who are aged between 46-59. There are some significant price elasticities. The dry wine price and fortified wine consumption are positively related, so the goods are substitutes. The own-price elasticity of fortified wine is -0.92. Vodka and fortified wine are substitutes too. Previous alcohol consumption again influenced the beverages' consumption to a high extent (from 10.3 to 16.3 percent).

Table 7 displays the results for rural area citizens only. There is no policy effect under this com-

munity restriction. Males consume more of all alcoholic beverages in comparison with females.

	(1)	(2)	(3)	(4)	(5)
	beer, gr	dry wine, gr	fortified wine, gr	moonshine, gr	vodka, gr
beer, rub	-0.031	-0.166	-0.154	-0.593	-0.178
	(0.083)	(0.103)	(0.184)	(0.320)	(0.075)
dry wine, rub	0.071	0.262	0.647**	0.465	0.175
	(0.166)	(0.188)	(0.261)	(0.754)	(0.147)
fortified wine, rub	-0.029	0.077	-0.929***	-0.398	0.019
	(0.063)	(0.093)	(0.188)	(0.334)	(0.108)
vodka, rub	0.058	-0.095	0.425*	0.149	0.088
	(0.086)	(0.105)	(0.222)	(0.404)	(0.120)
policy	-0.081	-0.068	-0.051	-0.0564	-0.136
	(0.064)	(0.091)	(0.144)	(0.273)	(0.102)
gender (male)	0.477***	0.239***	0.372***	0.651***	0.519***
	(0.026)	(0.050)	(0.053)	(0.117)	(0.020)
age group 1 (26-45)	-0.029	0.021	-0.161	-0.402*	0.003
	(0.038)	(0.076)	(0.133)	(0.230)	(0.079)
age group 2 (46-59)	-0.220***	-0.172**	-0.319*	-0.357	-0.071
	(0.042)	(0.071)	(0.161)	(0.274)	(0.083)
policy*age group 1	0.047	0.009	0.080	0.657**	0.145
	(0.056)	(0.088)	(0.118)	(0.285)	(0.102)
policy*age group 2	0.101*	0.116	0.157	0.646*	0.132
	(0.056)	(0.089)	(0.146)	(0.341)	(0.095)
policy*gender (male)	0.008	-0.066	-0.026	-0.091	-0.015
	(0.028)	(0.057)	(0.068)	(0.104)	(0.027)
alcohol consumer, lag	0.141***	0.103***	0.073	0.046	0.163***
N	8,723	4,208	1,289	484	7,528
R^2	0.156	0.050	0.110	0.254	0.168

[1] the same explanatory variables are use;

[2] robust standard errors;

[3] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6: The effect of MRP policy on alcohol consumption by the type of drink for urban citizens. OLS with community fixed effect

There is still an effect of previous alcohol consumption for rural area citizens but the number of observation is also small under this regional sample restriction. For example, if the person consumed alcoholic beverages last year, the consumption of beer increased by 13 percent. Such an increase one more time shows that drinking is an addictive habit. The dry wine own price elasticity

was fond to be -0.478. Additionally, vodka was found to be a substitute with fortified wine and moonshine.

	(1) beer, gr	(2) dry wine, gr	(3) fortified wine, gr	(4) moonshine, gr	(5) vodka, gr
beer, rub	0.283	0.382	0.375	-0.139	-0.022
	(0.149)	(0.255)	(0.493)	(0.323)	(0.165)
dry wine, rub	-0.001	-0.478*	-0.208	0.100	0.212
	(0.189)	(0.272)	(0.405)	(0.319)	(0.186)
fortified wine, rub	-0.050	-0.240	-0.345	-0.872	-0.545
	(0.244)	(0.385)	(0.526)	(0.314)	(0.215)
vodka, rub	0.121	0.172	0.544*	0.559***	0.263
	(0.112)	(0.244)	(0.280)	(0.205)	(0.128)
policy	-0.024	-0.014	-0.157	0.122	0.022
	(0.102)	(0.164)	(0.224)	(0.203)	(0.103)
gender (male)	0.661***	0.271**	0.632***	0.361***	0.598***
	(0.043)	(0.106)	(0.117)	(0.061)	(0.041)
age group 1 (26-45)	0.065	0.047	-0.094	0.157	0.048
	(0.061)	(0.132)	(0.185)	(0.169)	(0.077)
age group 2 (46-59)	-0.066	-0.071	-0.116	0.165	-0.006
	(0.070)	(0.140)	(0.226)	(0.153)	(0.077)
policy*age group 1	0.065	-0.000	0.198	0.095	0.023
	(0.084)	(0.172)	(0.237)	(0.190)	(0.099)
policy*age group 2	0.063	0.062	0.119	0.069	0.017
	(0.090)	(0.167)	(0.265)	(0.179)	(0.098)
policy*gender (male)	-0.030	-0.015	-0.190*	-0.034	-0.096**
	(0.044)	(0.134)	(0.114)	(0.081)	(0.046)
alcohol consumer, lag	0.130***	0.085	0.139**	0.160**	0.052
	(0.041)	(0.052)	(0.067)	(0.078)	(0.040)
N	3,682	1,090	563	678	3,339
R^2	0.238	0.077	0.223	0.235	0.201

[1] the same explanatory variables are use;

[2] robust standard errors;

[3] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 7: The effect of MRP policy on alcohol consumption by the type of drink for rural citizens. OLS with community fixed effect

5 Conclusion

This study finds empirical evidence that the implementation of the MRP policy on vodka and hard liquor changes the consumption of some alcoholic beverages other than vodka. The changed price of vodka and hard liquor mostly resulted in the higher use of other alcoholic beverages. The implemented policy affected only male vodka consumption.

The effect of policy differs on sample restriction. In comparison with females, males were more influenced by policy and increased their fortified wine consumption by 4.94 percent. At the same time, MRP affects different age groups and gender differently. Previous alcohol consumption has a significantly high effect on the current consumption of beer, dry wine, fortified wine, moonshine, and vodka. The results show that past consumption is much more influential than the change in beverage prices or policy.

Even though the policy was implemented to impose the minimum price of vodka and hard liquor, other types of alcohol were influenced to a higher extent. Particularly, the individuals did not decrease their consumption of vodka and at the same time switched to other alcoholic beverages to some extent. The consumption of alcohol did not decrease overall, which is in line with the conclusion of other studies on Russia reviewed in this paper that state that the pricing policies result in a reverse effect that makes people switch to more affordable beverages. At the same time, the strong effect of addiction habit is another possible reason for small policy effect. No matter of price, individuals do not change the consumption patterns due to the addiction to alcohol. Moreover, one of the main goals of the policy was to improve the alcohol quality so it was not just oriented at decreasing alcohol consumption, but tried to improve some health conditions and make people choose more affordable alternatives to hard drinks like vodka.

The conclusion shows that the price floor imposed on vodka did not decrease its consumption and conversely increased the consumption of other alcoholic beverages. That one more time proves that setting appropriate policy is complex work that needs careful estimation and combination with other regulations.

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Appendix

Year	Document
2001	Nalogoviy kodeks Rossiyskoy Federacii ot [Tax Code of Russian Federation on] 05.08.2000 N117-FZ
2002	Federalniy zakon ot [Federal law on] 07.08.2001 N118-FZ
2003	Federalniy zakon ot [Federal law on] 24.07.2002 N110-FZ
2004	Federalniy zakon ot [Federal law on] 07.07.2003 N117-FZ
2005	Federalniy zakon ot [Federal law on] 28.07.2014 N86-FZ
2006	Federalniy zakon ot [Federal law on] 21.07.2005 N107-FZ
2007	Federalniy zakon ot [Federal law on] 26.07.2006 N134-FZ
2008	Federalniy zakon ot [Federal law on] 16.05.2007 N75-FZ
2009	Federalniy zakon ot [Federal law on] 22.07.2008 N142-FZ
2010	Federalniy zakon ot [Federal law on] 28.11.2009 N282-FZ
2011	Federalniy zakon ot [Federal law on] 27.11.2010 N306-FZ
2012	Federalniy zakon ot [Federal law on] 28.11.2011 N338-FZ
2013	Federalniy zakon ot [Federal law on] 29.11.2012 N203-FZ
2014	Federalniy zakon ot [Federal law on] 30.09.2013 N269-FZ
2015	Federalniy zakon ot [Federal law on] 24.11.2014 N366-FZ

Table A1: List of Excise Tax Law documents

Source: Official Internet Resources of the President of Russia

Product type – Period	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	01.01 - 30.06 2012	1.07 - 31.12 2012	2013	2014	2015
Champagne, sparkling, and effervescent wines	9.45	10.58	10.5	10.5	10	10.5	10.5	10.5	10.5	14	18	22	22	24	25	25
Natural wines (except champagne, sparkling, and effervescent wines)	3.15	3.52	4	4	2.2	2.2	2.2	2.35	2.6	3.5	5	6	6	7	8	8
Wines (except natural wines)	36.75	41.2	47.5	52	95	112	-	-	-	-	-	-	-	-	-	-
Beer with ethyl spirit content less than 0.5 percent	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beer with ethyl spirit content between 0.5 and 8.6 percent	1	1.12	1.4	1.55	1.75	1.91	2.07	2.74	3	9	10	12	12	15	18	18
Beer with ethyl spirit content more than 8.6 percent	3.3	3.7	4.6	5.3	6.28	6.85	7.45	8.94	9.8	14	17	21	21	26	31	31
Alcoholic beverages with ethyl spirit content less than 9 percent (except wines)	-	-	-	-	76	83	-	110	121	158	190	230	270	320	400	400
Alcoholic beverages with ethyl spirit content more than 9 percent (except wines)	-	-	-	-	-	-	-	173.5	191	210	231	254	300	400	500	500
Alcoholic beverages with ethyl spirit content more than 25 percent (except wines)	-	-	-	-	146	159	-	-	-	-	-	-	-	-	-	-
Alcoholic beverages with ethyl spirit content between 9 and 25 percent (except wines)	-	-	-	-	108	118	-	-	-	-	-	-	-	-	-	-
Alcoholic beverages with ethyl spirit content less than 6 percent (except wines)	-	-	-	-	-	-	162	-	-	-	-	-	-	-	-	-
Natural wines (except untraditional unfortified ones)	-	-	2	2.2	-	-	-	-	-	-	-	-	-	-	-	-
Untraditional fortified wines	-	-	75	-	-	-	-	-	-	-	-	-	-	-	-	-
Cider, perry, mead	-	-		-	-	-	-	-	-	-	-	-	-	-	8	8

Table A2: Federal excise tax rates on alcoholic beverages, in roubles per 1 litre of drink

Source: Official Internet Resources of the President of Russia

Date of implementation	Price for vodka, in roubles per 0.5 bottle	Price for hard liquor, in roubles per 0.5 bottle	Document
01.01.2010	89	65	Prikaz RAR ot [Order of the Expert Council of the Federal Service for Alcohol Market Regulation on] 30.11.2009 N17n
01.01.2011	98	71	Prikaz RAR ot [Order of the Expert Council of the Federal Service for Alcohol Market Regulation on] 06.12.2010 N63n
01.07.2012	125	91	Prikaz RAR ot [Order of the Expert Council of the Federal Service for Alcohol Market Regulation on] 30.05.2012 N131
08.01.2013	170	123	Prikaz RAR ot [Order of the Expert Council of the Federal Service for Alcohol Market Regulation on] 13.12.2012 N372
11.03.2014	199	144	Prikaz RAR ot [Order of the Expert Council of the Federal Service for Alcohol Market Regulation on] 28.01.2014 N9
01.08.2014	220	160	Prikaz RAR ot [Order of the Expert Council of the Federal Service for Alcohol Market Regulation on] 28.01.2014 N9
01.02.2015	185	131	Prikaz RAR ot [Order of the Expert Council of the Federal Service for Alcohol Market Regulation on] 25.12.2014 N409

Table A3: Minimum Retailing Price values

Source: Expert Council of the Federal Service for Alcohol Market Regulation

	(1)	(2)	(3)	(4)	(5)
	beer,gr	dry wine, gr	fortified wine, gr	moonshin, gr	vodka, gr
beer, rub	0.014	-0.105	-0.065	-0.760	-0.165
	(0.077)	(0.095)	(0.161)	(0.195)	(0.072)
dry wine, rub	0.071	0.009	0.349*	0.598*	0.166
	(0.121)	(0.161)	(0.203)	(0.317)	(0.114)
fortified wine, rub	-0.023	0.070	-0.835***	-0.590	-0.085
	(0.067)	(0.092)	(0.189)	(0.374)	(0.115)
vodka, rub	0.083	-0.025	0.596***	0.302	0.137
	(0.067)	(0.092)	(0.176)	(0.188)	(0.088)
policy	-0.053	-0.061	-0.025	-0.136	-0.095
	(0.053)	(0.078)	(0.133)	(0.189)	(0.076)
gender (male)	0.529***	0.242***	0.430***	0.472***	0.542***
	(0.023)	(0.044)	(0.053)	(0.072)	(0.019)
age group 1 (26-45)	-0.001	0.021	-0.104	-0.055	0.011
	(0.033)	(0.066)	(0.108)	(0.156)	(0.057)
age group 2 (46-59)	-0.173***	-0.158**	-0.213	-0.013	-0.058
	(0.037)	(0.064)	(0.134)	(0.166)	(0.060)
policy*age group 1	0.048	0.009	0.089	0.255	0.115
	(0.046)	(0.077)	(0.120)	(0.189)	(0.075)
policy*age group 2	0.084*	0.108	0.110	0.205	0.103
	(0.047)	(0.076)	(0.143)	(0.204)	(0.070)
policy*gender (male)	-0.004	-0.065	-0.057	-0.025	-0.038*
	(0.023)	(0.051)	(0.060)	(0.063)	(0.023)
alcohol consumer, lag	0.141***	0.098***	0.104**	0.117*	0.118***
	(0.024)	(0.029)	(0.046)	(0.065)	(0.027)
educ. years	-0.014***	-0.004	-0.023***	-0.031***	-0.020***
	(0.003)	(0.004)	(0.006)	(0.011)	(0.004)
married	-0.072***	-0.051	-0.108**	-0.245***	-0.074**
	(0.024)	(0.062)	(0.052)	(0.077)	(0.034)
divorced	0.023	0.005	0.015	0.016	0.035
	(0.028)	(0.061)	(0.062)	(0.089)	(0.038)
widowed/er	0.034	0.063	0.046	-0.194*	-0.001
	(0.046)	(0.062)	(0.092)	(0.116)	(0.052)
household income	-0.010	-0.003	-0.012	-0.021*	-0.007
	(0.006)	(0.008)	(0.014)	(0.012)	(0.005)
household income, lag	-0.010*	0.013***	-0.026**	0.001	-0.013***
	(0.005)	(0.005)	(0.011)	(0.013)	(0.005)
job	-0.031	-0.030	-0.072	-0.136**	-0.083***
	(0.020)	(0.029)	(0.045)	(0.058)	(0.020)
job, lag	-0.035**	0.031	0.009	-0.083*	-0.053**
	(0.018)	(0.030)	(0.061)	(0.046)	(0.022)
number of kids	-0.035***	-0.053***	-0.021	-0.033**	-0.008
	(0.010)	(0.020)	(0.023)	(0.016)	(0.011)
maternity leave	-0.023	0.098**	0.079	0.407***	0.085*
	(0.048)	(0.037)	(0.101)	(0.142)	(0.046)
health status	0.022*	-0.026	0.019	0.045	-0.011
	(0.013)	(0.020)	(0.034)	(0.043)	(0.014)
cold water	0.029	0.036	0.055	0.017	-0.031
	(0.024)	(0.056)	(0.086)	(0.079)	(0.029)
sewerage	-0.066***	0.018	-0.036	-0.033	0.038
	(0.025)	(0.037)	(0.062)	(0.061)	(0.028)
heat	-0.002	-0.030	-0.013	0.037	-0.010
	(0.020)	(0.026)	(0.056)	(0.067)	(0.026)
hot water	0.049*	0.016	0.059	-0.008	-0.008
	(0.028)	(0.040)	(0.058)	(0.056)	(0.023)
GRP	0.017	0.340**	-0.091	0.233	0.040
	(0.086)	(0.135)	(0.171)	(0.234)	(0.079)
N	12,405	5,298	1,852	1,162	10,867
R^2	0.176	0.047	0.117	0.220	0.173

[1] robust standard errors;

[2] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A4: The effect of MRP policy on alcohol consumption by the type of drink. OLS with community fixed effect, full table

	(1) beer, gr	(2) dry wine, gr	(3) fortified wine, gr	(4) moonshine, gr	(5) vodka, gr
beer, rub	0.065	-0.437	0.213	-0.874	-0.167
	(0.111)	(0.226)	(0.419)	(0.266)	(0.093)
dry wine, rub	-0.008	-0.153	0.253	0.100***	0.084
	(0.155)	(0.415)	(0.617)	(0.349)	(0.116)
fortified wine, rub	-0.043	0.402	-0.894**	-0.813	-0.061
	(0.090)	(0.262)	(0.447)	(0.196)	(0.122)
vodka, rub	0.105	-0.349	0.698**	0.350	0.171
	(0.078)	(0.204)	(0.305)	(0.219)	(0.193)
policy	-0.027	0.076	0.0494*	-0.129	-0.107
	(0.078)	(0.263)	(0.265)	(0.176)	(0.075)
age group 1 (26-45)	-0.012	0.205	0.379**	0.059	-0.014
	(0.059)	(0.228)	(0.160)	(0.107)	(0.061)
age group 2 (45-59)	-0.144***	0.049	0.347**	0.113	-0.041
	(0.055)	(0.222)	(0.155)	(0.115)	(0.066)
policy*age group 1	0.027	-0.214	-0.405*	0.186	0.098
	(0.067)	(0.254)	(0.240)	(0.156)	(0.077)
policy*age group 2	0.050	-0.103	-0.433*	0.160	0.072
	(0.068)	(0.258)	(0.226)	(0.160)	(0.073)
alcohol consumer, 1ag	0.074**	0.021	0.046	0.081	0.040
	(0.033)	(0.076)	(0.128)	(0.069)	(0.033)
educ. years	-0.011***	-0.006	-0.037***	-0.025**	-0.016***
	(0.003)	(0.008)	(0.014)	(0.012)	(0.004)
married	-0.055	0.034	-0.244	-0.220***	-0.045
	(0.036)	(0.166)	(0.147)	(0.074)	(0.049)
divorced	0.015	0.159	-0.034	0.079	0.089*
	(0.041)	(0.180)	(0.133)	(0.086)	(0.051)
widower	-0.019	-0.570**	-0.927***	-0.084	-0.087
	(0.074)	(0.253)	(0.183)	(0.145)	(0.118)
household income	-0.010	0.005	-0.077*	-0.013	-0.008
	(0.007)	(0.014)	(0.043)	(0.011)	(0.008)
household income, lag	-0.013	0.021	-0.034	0.007	-0.017**
	(0.009)	(0.014)	(0.020)	(0.018)	(0.007)
job	-0.031	0.097	0.032	-0.158**	-0.082***
	(0.028)	(0.119)	(0.089)	(0.070)	(0.027)
job, lag	-0.019	-0.092	-0.075	-0.066	-0.043
	(0.026)	(0.090)	(0.097)	(0.058)	(0.026)
number of kids	-0.023*	-0.086**	-0.076	-0.051**	-0.017
	(0.012)	(0.037)	(0.052)	(0.020)	(0.012)
health status	0.032*	-0.029	-0.041	0.014	-0.024
	(0.017)	(0.045)	(0.061)	(0.047)	(0.016)
cold water	0.060**	0.013	-0.137	0.029	-0.027
	(0.030)	(0.170)	(0.115)	(0.098)	(0.036)
sewerage	-0.076*	0.264**	0.071	-0.069	0.070**
	(0.041)	(0.104)	(0.150)	(0.068)	(0.030)
heating	0.009	-0.039	-0.108	0.036	-0.021
	(0.031)	(0.069)	(0.108)	(0.075)	(0.029)
hot water	0.043	-0.263***	0.199*	0.004	-0.050*
	(0.039)	(0.096)	(0.107)	(0.060)	(0.028)
GRP	0.016	0.769***	-0.253	0.180	0.030
	(0.096)	(0.274)	(0.425)	(0.241)	(0.087)
N	7,531	1,045	566	874	7,250
R^2	0.022	0.049	0.106	0.120	0.028

[1] robust standard errors;

[2] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A5: The effect of MRP policy on male alcohol consumption by the type of drink. OLS with community fixed effect, full table

	(1)	(2)	(3)	(4)	(5)
	beer, gr	dry wine, gr	fortified wine, gr	moonshine, gr	vodka, gr
beer, rub	-0.053	-0.029	-0.164	-0.430	-0.168
	(0.081)	(0.090)	(0.243)	(0.279)	(0.071)
dry wine, rub	0.178	0.041	0.454*	-0.104	0.393**
	(0.151)	(0.184)	(0.258)	(0.127)	(0.193)
fortified wine, rub	0.011	0.022	-0.801***	-0.042	-0.144
	(0.092)	(0.095)	(0.261)	(0.429)	(0.158)
vodka, rub	0.034	0.048	0.427**	0.540	0.010
	(0.093)	(0.101)	(0.187)	(0.368)	(0.112)
policy	-0.095	-0.078	-0.155	-0.202	-0.116
	(0.076)	(0.072)	(0.152)	(0.319)	(0.161)
age group 1 (26-45)	0.017	-0.017	-0.204	-0.361	0.054
	(0.042)	(0.065)	(0.132)	(0.232)	(0.101)
age group 2 (46-54)	-0.262***	-0.200***	-0.361**	-0.286	-0.099
	(0.053)	(0.066)	(0.145)	(0.228)	(0.104)
policy*age group 1	0.062	0.030	0.171	0.647**	0.129
	(0.063)	(0.076)	(0.139)	(0.303)	(0.148)
policy*age group 2	0.116*	0.122*	0.196	0.355	0.120
	(0.066)	(0.073)	(0.151)	(0.312)	(0.151)
alcohol consumer, lag	0.202***	0.112***	0.142***	0.118	0.233***
	(0.036)	(0.031)	(0.053)	(0.140)	(0.044)
educ. years	-0.020***	-0.003	-0.015*	-0.060***	-0.027***
	(0.005)	(0.005)	(0.008)	(0.020)	(0.005)
married	-0.096**	-0.053	-0.093*	-0.097	-0.097*
	(0.043)	(0.065)	(0.055)	(0.150)	(0.054)
divorced	0.025	0.003	-0.016	-0.006	-0.024
	(0.046)	(0.062)	(0.078)	(0.179)	(0.060)
widowed	0.080	0.093	0.119	-0.168	0.020
	(0.059)	(0.058)	(0.091)	(0.192)	(0.065)
household income	-0.008	-0.001	-0.009	-0.051	-0.002
	(0.009)	(0.007)	(0.017)	(0.038)	(0.006)
household income, lag	-0.006	0.011**	-0.020	-0.016	-0.005
	(0.005)	(0.005)	(0.014)	(0.027)	(0.009)
job	-0.039	-0.047	-0.046	0.019	-0.086**
	(0.032)	(0.030)	(0.049)	(0.081)	(0.038)
job, lag	-0.049*	0.057*	0.052	-0.189***	-0.055
	(0.026)	(0.032)	(0.067)	(0.067)	(0.034)
number of kids	-0.045***	-0.043**	0.001	0.082*	0.008
	(0.015)	(0.019)	(0.022)	(0.045)	(0.018)
maternity leave	-0.071	0.097***	0.048	0.233	0.031
	(0.051)	(0.036)	(0.108)	(0.184)	(0.050)
health status	0.010	-0.032	0.049	0.195*	0.007
	(0.017)	(0.023)	(0.041)	(0.109)	(0.021)
cold water	-0.004	0.025	0.123	-0.007	-0.049
	(0.034)	(0.051)	(0.099)	(0.112)	(0.045)
sewerage	-0.047*	-0.023	-0.078	-0.155	-0.025
	(0.027)	(0.038)	(0.081)	(0.183)	(0.053)
heat	-0.022	-0.034	-0.022	0.358***	0.018
	(0.032)	(0.027)	(0.069)	(0.131)	(0.039)
hot water	0.051	0.071*	0.037	-0.151	0.065
	(0.032)	(0.039)	(0.070)	(0.120)	(0.044)
GRP	0.071	0.222	0.120	0.302	0.073
	(0.121)	(0.135)	(0.182)	(0.380)	(0.123)
N	4,874	4,253	1,286	288	3,617
R^2	0.058	0.038	0.049	0.253	0.053

[1] robust standard errors;

[2] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A6: The effect of MRP policy on female alcohol consumption by the type of drink. OLS with community fixed effect, full table

	(1)	(2)	(3)	(4)	(5)
	beer, gr	dry wine, gr	fortified wine, gr	moonshine, gr	vodka, gr
beer, rub	0.036	-0.138	0.043	-0.746	-0.160
	(0.077)	(0.118)	(0.174)	(0.168)	(0.070)
dry wine, rub	0.027	-0.040	0.187	0.660**	0.117
	(0.113)	(0.157)	(0.212)	(0.259)	(0.113)
fortified wine, rub	0.033	0.126	-0.714***	-0.646	-0.024
	(0.068)	(0.101)	(0.203)	(0.196)	(0.117)
vodka, rub	0.054	-0.044	0.500**	0.446**	0.106
	(0.070)	(0.101)	(0.195)	(0.225)	(0.090)
policy	-0.061	-0.095	-0.083	-0.174	-0.085
	(0.056)	(0.078)	(0.144)	(0.188)	(0.082)
gender (male)	0.532***	0.246***	0.437***	0.489***	0.538***
	(0.025)	(0.048)	(0.064)	(0.077)	(0.020)
age group 1 (26-45)	-0.009	-0.005	-0.076	-0.004	0.037
	(0.037)	(0.065)	(0.108)	(0.162)	(0.067)
age group 2 (46-59)	-0.166***	-0.180**	-0.249*	-0.008	-0.051
	(0.040)	(0.069)	(0.133)	(0.175)	(0.070)
policy*age group 1	0.062	0.035	0.076	0.269	0.084
	(0.051)	(0.078)	(0.126)	(0.199)	(0.080)
policy*age group 2	0.089*	0.145*	0.147	0.263	0.095
	(0.052)	(0.080)	(0.155)	(0.211)	(0.074)
policy*gender (male)	-0.008	-0.077	-0.035	-0.008	-0.035
	(0.024)	(0.054)	(0.065)	(0.078)	(0.023)
alcohol consumer, lag	0.129***	0.089***	0.080*	0.130*	0.129***
	(0.024)	(0.033)	(0.042)	(0.074)	(0.027)
educ. years	-0.015***	-0.005	-0.023***	-0.032**	-0.021***
	(0.003)	(0.005)	(0.007)	(0.012)	(0.004)
married	-0.071**	-0.045	-0.099*	-0.221***	-0.074*
	(0.028)	(0.055)	(0.056)	(0.083)	(0.038)
divorced	0.013	-0.007	0.033	-0.009	0.038
	(0.031)	(0.052)	(0.064)	(0.095)	(0.040)
widowed/er	0.012	0.067	0.013	-0.132	-0.007
	(0.053)	(0.063)	(0.101)	(0.126)	(0.052)
household income	-0.008	-0.004	-0.007	-0.022*	-0.005
	(0.007)	(0.008)	(0.014)	(0.012)	(0.006)
household income, lag	-0.010**	0.014***	-0.028**	0.005	-0.011**
	(0.005)	(0.005)	(0.012)	(0.014)	(0.006)
job	-0.043*	-0.033	-0.076	-0.144*	-0.082***
	(0.023)	(0.030)	(0.048)	(0.075)	(0.022)
job, lag	-0.041**	0.030	0.010	-0.102*	-0.050**
	(0.018)	(0.035)	(0.064)	(0.061)	(0.024)
number of kids	-0.035***	-0.051**	-0.012	-0.039*	0.000
	(0.011)	(0.021)	(0.024)	(0.020)	(0.011)
maternity leave	-0.022	0.130***	0.066	0.357*	0.116**
	(0.052)	(0.043)	(0.107)	(0.185)	(0.057)
health status	0.012	-0.026	0.026	0.024	-0.009
	(0.013)	(0.023)	(0.035)	(0.047)	(0.014)
cold water	0.026	0.023	0.056	-0.005	-0.028
	(0.028)	(0.063)	(0.086)	(0.079)	(0.030)
sewerage	-0.069***	0.010	-0.028	0.058	0.032
	(0.025)	(0.044)	(0.069)	(0.065)	(0.030)
heating	0.006	-0.015	-0.017	-0.021	-0.021
	(0.020)	(0.030)	(0.063)	(0.073)	(0.027)
hot water	0.041	0.015	0.047	-0.012	-0.009
	(0.027)	(0.046)	(0.061)	(0.064)	(0.023)
GRP	-0.009	0.392***	0.031	0.144	0.056
	(0.084)	(0.144)	(0.176)	(0.291)	(0.086)
N	11,191	4,824	1,666	939	9,349
R^2	0.178	0.044	0.121	0.229	0.174

[1] robust standard errors;

[2] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A7: The effect of MRP policy on alcohol consumption by the type of drink for Russian nationality.

OLS with community fixed effect, full table

	(1)	(2)	(3)	(4)	(5)
	beer, gr	dry wine, gr	fortified wine, gr	moonshine, gr	vodka, gr
beer, rub	-0.031	-0.166	-0.154	-0.593	-0.178
	(0.083)	(0.103)	(0.184)	(0.320)	(0.075)
dry wine, rub	0.071	0.262	0.647**	0.465	0.175
	(0.166)	(0.188)	(0.261)	(0.754)	(0.147)
fortified wine, rub	-0.029	0.077	-0.929***	-0.398	0.019
	(0.063)	(0.093)	(0.188)	(0.334)	(0.108)
vodka, rub	0.058	-0.095	0.425*	0.149	0.088
	(0.086)	(0.105)	(0.222)	(0.404)	(0.120)
policy	-0.081	-0.068	-0.051	-0.0564	-0.136
	(0.064)	(0.091)	(0.144)	(0.273)	(0.102)
gender (male)	0.477***	0.239***	0.372***	0.651***	0.519***
	(0.026)	(0.050)	(0.053)	(0.117)	(0.020)
age group 1 (26-45)	-0.029	0.021	-0.161	-0.402*	0.003
	(0.038)	(0.076)	(0.133)	(0.230)	(0.079)
age group 2 (46-59)	-0.220***	-0.172**	-0.319*	-0.357	-0.071
	(0.042)	(0.071)	(0.161)	(0.274)	(0.083)
policy*age group 1	0.047	0.009	0.080	0.657**	0.145
	(0.056)	(0.088)	(0.118)	(0.285)	(0.102)
policy*age group 2	0.101*	0.116	0.157	0.646*	0.132
	(0.056)	(0.089)	(0.146)	(0.341)	(0.095)
policy*gender (male)	0.008	-0.066	-0.026	-0.091	-0.015
	(0.028)	(0.057)	(0.068)	(0.104)	(0.027)
alcohol consumer, lag	0.141***	0.103***	0.073	0.046	0.163***
	(0.032)	(0.035)	(0.063)	(0.126)	(0.034)
educ. years	-0.015***	-0.006	-0.025***	-0.040**	-0.020***
	(0.003)	(0.005)	(0.008)	(0.019)	(0.005)
married	-0.058**	-0.029	-0.061	-0.448**	-0.059
	(0.027)	(0.072)	(0.059)	(0.167)	(0.038)
divorced	0.034	0.013	0.075	-0.219	0.040
	(0.033)	(0.071)	(0.071)	(0.194)	(0.043)
widowed/er	0.021	0.075	0.121	-0.513*	-0.021
	(0.059)	(0.073)	(0.113)	(0.258)	(0.068)
household income	-0.004	-0.002	-0.015	-0.025**	-0.002
	(0.007)	(0.008)	(0.017)	(0.011)	(0.005)
household income, lag	-0.009	0.013**	-0.030*	-0.004	-0.015**
	(0.006)	(0.005)	(0.015)	(0.019)	(0.006)
job	-0.018	-0.018	-0.015	-0.133	-0.072**
	(0.027)	(0.034)	(0.055)	(0.150)	(0.027)
job, lag	-0.044*	0.012	-0.088	-0.029	-0.078**
	(0.022)	(0.035)	(0.074)	(0.112)	(0.029)
number of kids	-0.039***	-0.073***	-0.049	-0.102**	-0.017
	(0.011)	(0.024)	(0.038)	(0.042)	(0.016)
maternity leave	0.002	0.061	0.069	0.514	0.085
	(0.058)	(0.043)	(0.119)	(0.307)	(0.053)
health status	0.024	-0.054**	-0.012	0.059	-0.009
	(0.015)	(0.022)	(0.040)	(0.081)	(0.017)
cold water	0.031	0.050	-0.001	0.092	-0.048*
	(0.029)	(0.061)	(0.104)	(0.176)	(0.026)
sewer	-0.093***	0.017	-0.050	-0.011	0.032
	(0.029)	(0.046)	(0.068)	(0.158)	(0.036)
heating	0.018	-0.041	-0.012	-0.044	-0.016
	(0.023)	(0.028)	(0.070)	(0.156)	(0.032)
hot water	0.059	0.051	0.065	0.123	-0.002
	(0.038)	(0.054)	(0.076)	(0.142)	(0.028)
GRP	0.133	0.284	0.175	0.366	0.022
	(0.111)	(0.170)	(0.216)	(0.499)	(0.101)
N	8,723	4,208	1,289	484	7,528
R^2	0.156	0.050	0.110	0.254	0.168

[1] robust standard errors;

[2] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A8: The effect of MRP policy on alcohol consumption by the type of drink for urban citizens. OLS with community fixed effect, full table, full table

	(1)	(2)	(3)	(4)	(5)
	beer, gr	dry wine, gr	fortified wine, gr	moonshine, gr	vodka, gr
beer, rub	0.283	0.382	0.375	-0.139	-0.022
	(0.149)	(0.255)	(0.493)	(0.323)	(0.165)
dry wine, rub	-0.001	-0.478*	-0.208	0.100	0.212
	(0.189)	(0.272)	(0.405)	(0.319)	(0.186)
fortified wine, rub	-0.050	-0.240	-0.345	-0.872	-0.545
	(0.244)	(0.385)	(0.526)	(0.314)	(0.215)
vodka, rub	0.121	0.172	0.544*	0.559***	0.263
	(0.112)	(0.244)	(0.280)	(0.205)	(0.128)
policy	-0.024	-0.014	-0.157	0.122	0.022
	(0.102)	(0.164)	(0.224)	(0.203)	(0.103)
gender (male)	0.661***	0.271**	0.632***	0.361***	0.598***
	(0.043)	(0.106)	(0.117)	(0.061)	(0.041)
age group 1 (26-45)	0.065	0.047	-0.094	0.157	0.048
	(0.061)	(0.132)	(0.185)	(0.169)	(0.077)
age group 2 (46-59)	-0.066	-0.071	-0.116	0.165	-0.006
	(0.070)	(0.140)	(0.226)	(0.153)	(0.077)
policy*age group 1	0.065	-0.000	0.198	0.095	0.023
	(0.084)	(0.172)	(0.237)	(0.190)	(0.099)
policy*age group 2	0.063	0.062	0.119	0.069	0.017
	(0.090)	(0.167)	(0.265)	(0.179)	(0.098)
policy*gender (male)	-0.030	-0.015	-0.190*	-0.034	-0.096**
	(0.044)	(0.134)	(0.114)	(0.081)	(0.046)
alcohol consumer, lag	0.130***	0.085	0.139**	0.160**	0.052
	(0.041)	(0.052)	(0.067)	(0.078)	(0.040)
educ. years	-0.013**	0.004	-0.016	-0.011	-0.023***
	(0.005)	(0.008)	(0.012)	(0.011)	(0.005)
married	-0.115**	-0.143***	-0.171	-0.176*	-0.103
	(0.054)	(0.045)	(0.104)	(0.098)	(0.076)
divorced	-0.026	-0.052	-0.135	0.110	0.029
	(0.052)	(0.048)	(0.111)	(0.085)	(0.074)
widowed/er	0.048	-0.007	-0.055	-0.125	0.027
	(0.076)	(0.089)	(0.156)	(0.138)	(0.087)
household income	-0.036***	-0.019	0.015	-0.019	-0.028
	(0.012)	(0.030)	(0.031)	(0.024)	(0.018)
household income, lag	-0.010	0.021	-0.012	-0.005	-0.006
	(0.010)	(0.026)	(0.016)	(0.018)	(0.007)
job	-0.044	-0.082	-0.214***	-0.120**	-0.095***
	(0.030)	(0.056)	(0.075)	(0.054)	(0.032)
job, lag	-0.025	0.105	0.189*	-0.108**	-0.026
	(0.027)	(0.064)	(0.097)	(0.041)	(0.031)
number of ids	-0.028*	0.003	0.018	0.002	0.004
	(0.017)	(0.030)	(0.020)	(0.013)	(0.016)
maternity leave	-0.106	0.224***	0.138	0.371***	0.087
	(0.087)	(0.081)	(0.222)	(0.098)	(0.094)
health status	0.020	0.095***	0.092	0.047	-0.017
	(0.026)	(0.035)	(0.063)	(0.055)	(0.024)
cold water	0.038	-0.009	0.129	-0.082	0.001
	(0.045)	(0.073)	(0.156)	(0.062)	(0.058)
sewerage	0.018	0.110*	-0.003	-0.081	0.078
	(0.050)	(0.063)	(0.108)	(0.070)	(0.047)
heating	-0.081*	0.005	-0.028	0.114	0.004
	(0.041)	(0.065)	(0.093)	(0.071)	(0.042)
hot water	0.053	-0.062	0.039	-0.046	-0.014
	(0.048)	(0.054)	(0.088)	(0.066)	(0.036)
GRP	-0.210	0.344	-0.470	0.080	0.124
	(0.133)	(0.218)	(0.304)	(0.206)	(0.131)
N	3,682	1,090	563	678	3,339
R^2	0.238	0.077	0.223	0.235	0.201

[1] robust standard errors;

[2] consumption, price, income, and GRP values are in the log form.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A9: The effect of MRP policy on alcohol consumption by the type of drink for rural citizens. OLS with community fixed effect, full table